1272.C0436

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)
                                          :   Examiner: Jerome Grant II
NOBUYUKI NAKAJIMA   )
                                          :   Group Art Unit: 2626
Application No.: 09/661,151   )
                                          :
Filed: September 13, 2000   )
                                          :
For: IMAGE PROCESSING METHOD   )
        OF GENERATING CONVERSION :
        DATA FOR A SCANNER AND   )
        CALIBRATION METHOD   :
        EMPLOYING THE SCANNER   )   August 5, 2004

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

AMENDMENT

Sir:

In response to the Office Action dated May 6, 2004, please amend the above-

identified application as follows:

CLAIM AMENDMENTS:

Please cancel Claim 2 and amend Claims 1, 3, 5, 7, and 9-16, as follows:

1.   (Currently Amended) An image processing method of generating a conversion condition for a scanner which is used for reading an image and generating image data, said method comprising the steps of:

obtaining a reading property of an object scanner based on image data ~~obtained by that~~ read from a chart by the object scanner ~~reads a chart~~; and

generating the conversion condition for the object scanner based on the reading property of the object scanner, a previously prepared reading property of a standard scanner, and a previously prepared brightness-density conversion condition for the standard scanner,

wherein said generating step combines an inverse function of an input level-brightness conversion property of the object scanner, an input level-brightness conversion property of the standard scanner, and the brightness-density conversion condition of the standard scanner so as to generate the conversion condition for converting an input level in the object scanner to density data in the standard scanner.

2.   (Cancelled)

3.   (Currently Amended) An image processing method as claimed in claim 1 further comprising the steps of:

- 2 -

inputting image data ~~obtained by that the object scanner reads a~~ read from the chart formed by image forming means;

converting the input image data to density data by using the conversion condition generated; and

calibrating a correction condition for the image forming means based on the density data.

4. (Original) An image processing method of generating a correction condition for a scanner used when calibrating a correction condition for image forming means; said method comprising the steps of:

holding a correction condition for a standard scanner;

judging as to whether the scanner used for calibration is the standard scanner or not;

executing generation of the correction condition for the scanner when the scanner is not judged to be the standard scanner; and

not executing generation of the correction condition for the scanner when the scanner is judged to be the standard scanner.

5. (Currently Amended) An image processing apparatus for generating a conversion condition for a scanner which is used for reading an image and generating image data, said apparatus comprising:

means for obtaining a reading property of an object scanner based on image data ~~obtained by that~~ read from a chart by the object scanner ~~reads a chart~~; and

generating means for generating the conversion condition for the object scanner based on the reading property of the object scanner, a previously prepared reading property of a standard scanner, and a previously prepared brightness-density conversion condition for the standard scanner,

wherein said generating means combines an inverse function of an input level-brightness conversion property of the object scanner, an input level-brightness conversion property of the standard scanner, and the brightness-density conversion condition of the standard scanner so as to generate the conversion condition for converting an input level in the object scanner to density data in the standard scanner.

6.   (Original) An image processing apparatus comprising:

generating means for generating a correction condition for a scanner used when calibrating a correction condition for image forming means;

holding means for holding a correction condition for a standard scanner; and

judging means for judging as to whether the scanner used for calibration is the standard scanner or not;

wherein said generating means executes generation of the correction condition for the scanner when the scanner is not judged to be the standard scanner, and said

generating means does not execute generation of the correction condition for the scanner when the scanner is judged to be the standard scanner.

7.   (Currently Amended) A storage medium storing a program readably by a computer, the program being for realizing an image processing method of generating a conversion condition for a scanner which is used for reading an image and generating image data, said method comprising the steps of:

obtaining a reading property of an object scanner based on image data ~~obtained by that~~ read from a chart by the object scanner ~~reads a chart~~; and

generating the conversion condition for the object scanner based on the reading property of the object scanner, a previously prepared reading property of a standard scanner, and a previously prepared brightness-density conversion condition for the standard scanner,

wherein said generating step combines an inverse function of an input level-brightness conversion property of the object scanner, an input level-brightness conversion property of the standard scanner, and the brightness-density conversion condition of the standard scanner so as to generate the conversion condition for converting an input level in the object scanner to density data in the standard scanner.

8.   (Original) A storage medium storing a program readably by a computer, the program being for realizing an image processing method of generating a correction condition for a scanner used when calibrating a correction condition for image forming means;

said method comprising the steps of:

holding a correction condition for a standard scanner;

judging as to whether the scanner used for calibration is the standard

scanner or not;

executing generation of the correction condition for the scanner when the

scanner is not judged to be the standard scanner; and

not executing generation of the correction condition for the scanner when

the scanner is judged to be the standard scanner.

9.   (Currently Amended) An image processing method as claimed in claim 1,

further comprising the step of:

informing a user of that the reading property is inappropriate when the

reading property obtained by said obtaining step is inappropriate for generation of the conversion

condition in said generating step.

10.   (Currently Amended) An image processing method as claimed in claim 9,

further comprising the step of:

displaying the reading property obtained by said obtaining step by means

of a predetermined display device.

11.   (Currently Amended) An image processing apparatus as claimed in claim

5, further comprising:

means for informing a user of that the reading property is inappropriate when the reading property obtained by said means for obtaining is inappropriate for generation of the conversion condition by said generating means.

12.   (Currently Amended) An image processing apparatus as claimed in claim 11, further comprising:

display means for displaying the reading property obtained by said means for obtaining.

13.   (Currently Amended) A calibration method of performing a calibration for a printing apparatus, said method comprising the steps of:

preparing a reading device for reading a predetermined image printed by the printing apparatus;

executing the calibration by renewing brightness-density conversion data obtained based on a reading property of the reading device, a previously prepared predetermined reading property and a previously prepared brightness-density conversion condition corresponding to the predetermined reading property; and

measuring density of the predetermined image by means of the reading device which has been subject to calibration by said calibration step; and

generating calibration data for the calibration for the printing apparatus based on a result of measurement in said measuring step,

wherein said executing calibration step combines an inverse function of an input level-brightness conversion property of the reading device, an input level-brightness conversion property as determined by the reading property, and the brightness-density conversion condition corresponding to the predetermined reading property, so as to renew the brightness-density conversion data.

14.   (Currently Amended) A calibration method as claimed in claim 13, wherein renewing brightness-density conversion data is performed by selecting brightness-density conversion data corresponding to the reading device relating to the calibration from a previously prepared plurality of brightness-density conversion data.

15.   (Currently Amended) An information processing apparatus for performing a calibration for a printing apparatus, said apparatus comprising:

reading control means for controlling a reading device for reading a predetermined image printed by the printing apparatus;

executing means for executing the calibration by renewing brightness-density conversion data obtained based on a reading property of the reading device, a previously prepared predetermined reading property and a previously prepared brightness-density conversion condition corresponding to the predetermined reading property; and

generating means for generating calibration data for the calibration for the printing apparatus based on a density measurement result measured by, under the control of said

- 8 -

reading control means, the reading device which has been subject to calibration by said executing means,

wherein said generating means combines an inverse function of an input level-brightness conversion property of the object scanner, an input level-brightness conversion property of the standard scanner, and the brightness-density conversion condition of the standard scanner so as to generate the conversion condition for converting an input level in the object scanner to density data in the standard scanner.

16.   (Currently Amended) An information processing apparatus as claimed in claim 15, wherein said executing means renews brightness-density conversion data by selecting brightness-density conversion data corresponding to the reading device relating to the calibration from a previously prepared plurality of brightness-density conversion data.